

Color of robins' eggs determines parental care

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A male robin will be more diligent in caring for its young if the eggs its mate lays are a brighter shade of blue.

Queen's University biology professor Bob Montgomerie has been studying robins on and off for 25 years and has a particular fascination with the bright blue colour of their eggs. To test a theory on the purpose of bright egg colouration, Dr. Montgomerie and MSc student Philina English, working at the Queen's University Biological Station (QUBS) and other sites around Kingston, replaced the real eggs in robins' nests with artificial eggs of different shades of blue.

Just before the real eggs would have hatched, the researchers replaced the artificial eggs with baby robins.

"We were testing the idea males can use egg colour as a signal of the quality and health of their mate, and that healthy mates create better babies," says Dr. Montgomerie, whose research focuses on [sexual selection](#) and parental care in birds. "Sure enough, males whose nests contained the brightest blue eggs fed their newly-hatched babies twice as much."

The blue colour in robin eggs is due to biliverdin, a [pigment](#) deposited on the eggshell when the female lays the eggs. There is some evidence that higher biliverdin levels indicate a healthier female and brighter blue eggs. [Eggs](#) laid by a healthier female seemed to encourage males to take more interest in their young.

The paper was published in [Behavioral Ecology and Sociobiology](#).

Provided by Queen's University

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